

(first occurrence) to --54--.

REMARKS

Claims 1-16 and 19-41 are in this application. Claims 29 and 30 were indicated to contain allowable subject matter. By this amendment, claims 17 and 18 have been canceled; claims 3, 13, 16, and 25 have been amended; and claims 31-41 have been added. Re-examination, reconsideration and allowance of this application is respectfully requested. No new matter is added.

Claim 3 has been amended to correct a grammatical error. Claim 16 has been amended to incorporate limitations of the canceled claims 17 and 18 as originally presented. The amendment of claim 25 finds support in claim 19 as originally presented, and in the specification at page 15, lines 19-23.

New claim 31 finds support in the specification at page 21, lines 7-13. New independent claim 32 corresponds generally to claim 5. New claims 33-36 find support in the specification at page 12, the last paragraph and at page 18, lines 5-13. New claim 37 finds support in claims 19 and 25 as originally presented; new claims 38 and 39 find support in the specification at page 20, line 30 and continuing to page 21, line 6. New claim 40 finds support in the specification at page 22, lines 7-11. New claim 41 finds support in the specification at page 20, lines 20-29.

INFORMALITIES

Enclosed is a Substitute Declaration incorporating the clause regarding "willful false statements . . ." required by 37 CFR 1.68, which was inadvertently omitted from the original Declaration.

The Abstract was objected to as exceeding the allowed 50-250 words. The



undersigned has verified that the Abstract as originally submitted includes 248 words only. Thus it is believed that the objection is inappropriate; withdrawal thereof is respectfully requested.

Claim 13 has been amended as suggested by the Examiner to correct a typographical error; claim 18, which also included a typographical error, has been canceled.

DRAWINGS

Figure 2 of the drawings has been amended to correctly designate the test signature step as 53 and to designate the print receipts step as 54, as described at page 15, lines 8 and 19. Enclosed is a copy of sheet 2 of the drawings with the changes marked in red, and a proposed replacement for sheet 2 of the drawings (formal) to be substituted upon approval of these changes.

REJECTION UNDER 35 U.S.C. 102(b)

Claims 1-4 were rejected under 35 U.S.C. 102(b) as being anticipated by the Beatson et al reference. It was suggested that the Beatson et al. reference discloses a system for managing handwritten signatures, including a graphic tablet, a clock circuit for periodically initiating position measurements by the tablet at fixed time intervals, a processor interfaced with the tablet and programmed for receiving and storing coordinates of the stylus in sequential order to form an electronic signature as a time history of stylus movement, means for comparing the signature with a reference signature, a cross-correlator for evaluating a degree of correspondence between the signatures, and the memory being interfaced with the processor. This rejection is respectfully traversed.

As discussed below, the Beatson et al. reference fails to disclose either means for verifying fixed time intervals of the samples from the tablet as claimed in claim 1, or of utilizing the complete and stored time history of a signature to verify the signature as claimed in claim 3.



Regarding claim 1, applicant claims the tablet and the clock circuit, the clock circuit initiating and thereby timing the samples and, additionally, means for verifying the fixed time intervals. In contrast, the processor issues separate requests for each measurement sample in the system of Beatson et al., there being no means for verifying the time intervals as claimed by Applicant. Applicant's system advantageously allows the clock circuit to be associated (or included) with the tablet because of the inclusion of the means for verifying the intervals. Applicant's system as claimed in claim 1 permits reduced processor overhead while preventing operation at unauthorized timing intervals.

It is believed that the rejection of claims 1-4 under 35 U.S.C. 102(b) has been overcome by the above remarks; withdrawal thereof and allowance of these claims is respectfully requested.

REJECTIONS UNDER 35 U.S.C. 103

Claims 5 and 28 were rejected under 35 U.S.C. 103 as being unpatentable over the Beatson et al reference in view of the Moore and Haneda et al. reference. Claims 6-8, 14-17, and 25-27 were similarly rejected as being unpatentable over the Beatson et al reference in view of Romney et al. Claims 9-11 and 13 were rejected under 35 U.S.C.103(a) as being unpatentable over Beatson et al in view of Howbrook. Claim 12 was similarly rejected under 35 U.S.C. 103(a) as being unpatentable over Beatson et al. further in view of Howbrook and Howell et al. Lastly, claims 18-24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Beatson et al. in view of Romney et al. and Matyas et al. It was suggested that it would be obvious to modify the invention of Beatson et al. to compare signatures using simultaneous graphical display as taught by Moore and with respective cursors located on corresponding line segments and oriented perpendicular to the line segments as taught by Haneda et al.. It was also suggested that it would be obvious to associate a date and time, or an annotation of a location, address, or identification string, with a signature, or to encrypt the time history to a fixed key of arbitrary length, as a hash



function or message digest, as taught by Romney et al, and erasing each instance of the encryption key as taught by Matyas et al. Finally, it was suggested that Howell et al. suggest programming to determine a ratio of a total elapsed time of the measurements and a total number of the measurements. These rejections are respectfully traversed as to Applicant's claims as amended.

The Applied References

The Beatson reference discloses a signature capture/verification system including a graphic tablet that periodically samples the position of a stylus to produce samples that are stored and which may be used to recreate an electronic image of a signature. (See Col. 12, lines 42-51.) The data may be compressed and stored "on the fly" and is formatted for output and encrypted as a compressed encrypted signature image data (Col 15, lines 53 to Col .16, line 1), or after processing such as by an angle-correcting process (Col. 16, lines 5-13). After the angle-correcting process, the [system] extracts significant signature features and compares them with a verified signature template (Col 17, lines 21-24). During the signing process, preliminary functions such as a combination of timing and position functions can be generated, final values being fixed upon termination of signing (Col 17, lines 28-39). Applicants emphasize that there is no disclosure of utilizing the complete and stored time history of a signature to verify the signature, or of means for verifying fixed time intervals of the samples.

The Moore reference discloses a system for detecting forged signatures wherein exemplar and unauthenticated signatures are simultaneously displayed.

The Haneda et al. reference discloses display of handwriting, with phrases initially displayed in an input position. A phrase in the input position is relocated to following a cursor position upon pressing of a "W" button, the cursor being then relocated to following the relocated phrase. In this way, successive phrases, following completion, are processed to produce normalized stroke data, and relocated in the display to produce a continuous displayed string.

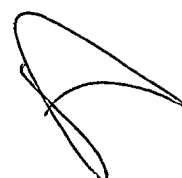


Applicants emphasize that the cursor is disclosed as being vertically oriented only, and the cursor is located either ahead of or behind complete phrases. (See Figs. 3A-3D and Col. 10, line 22 to Col. 11, line 20.)

The Romney et al. reference discloses a document authentication system wherein an unsigned document is transported on a floppy disk that also has a client's public and private keys recorded thereon, and an authenticator witnesses the client's digital signature, checks the client's identity and verifies the signature using the public key, also confirming that the private key corresponds to the public key, appending an identification envelope (which can contain place/time annotation and biometric data from the client) to the electronic document. As disclosed beginning at Col. 5, line 1, the digital signature is disclosed as being produced by the client "giving appropriate commands to the authenticator's computer, using the client's private key contained (in pass phrase protected form) on the client's storage media. The software in the authenticator's computer creates the digital signature . . . by deriving . . . and encrypting [a] message digest with the private key" It is further disclosed that the identification envelope can contain biometric data (digital 1's and 0's or a text string) from biometric readings of the client.

The Matyas et al. reference discloses a system for secure management of keys using control vectors that authorize generation, distribution and use of cryptographic keys. An ANSI Key Manager accesses CFAP services that include retrieve, store, and delete key function calls. Applicants emphasize that there is no disclosure of a protocol for whether or when the delete key function is used.

The Howbrook reference discloses a position sensing apparatus using a stationary coil array having phase shifters between the coils, and one or a pair of coils in a stylus, the coil(s) of the stylus being excited by an oscillator to produce an output of the array having a monotonic phase shift in response to the position of the stylus. The oscillator can drive the stylus through wires, or the oscillator can be in the stylus.



The Howell et al. reference discloses a system for capturing and verifying a signature using a light-sensitive pen on paper having a pre-printed grid, a circuit producing pulses for each crossing of a grid line (*See* Col. 6, lines 51-56). Analysis of the pulses can include calculating the "average pulse frequency (the number of pulses divided by the total time)," as disclosed at Col. 8, lines 57-58. Applicants emphasize that the timing of the pulses varies and is dependent on the intervals between successive line-crossings.

Argument

The rejections under 35 U.S.C. 103 are believed to be inappropriate as to Applicant's claims as amended for the reasons presented above regarding claims 1-4 as to claims 5-14, and because each of the claims in this application requires one or more limitations that are not disclosed or suggested in any one or combination of the references.

Regarding claims 5 and 28, the Haneda et al. reference fails to disclose or suggest Applicant's display having cursors oriented perpendicular to the line segments to which they point.

Regarding claims 16 and 25 as amended and claim 19, the Mayas et al. reference fails to disclose erasing of each instance of the encryption key. Instead, Mayas et al. show a "Delete Key" function, but fail to provide an enabling disclosure of Applicant's invention wherein *each instance* of the key is erased.

Thus, even if the references are combined, there is no prima facie case of obviousness not only because a combination of the references fails to provide Applicant's invention, but also because the references do not suggest the combination. As stated in *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984), in reversing a rejection under 35 U.S.C. 103:

We are persuaded that the Board erred in its conclusion of prima facie obviousness The mere fact that the prior art could be so



modified (merely turning the prior art upside down) would not have made the modification obvious unless the prior art suggested the desirability of the modification. (citations) 221 USPQ at 1127.

Similarly, the CAFC has recently demonstrated in *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988), the importance of requiring evidence of reasons in the prior art for making a combination of references before finding a prima facie case of obviousness. In response to the solicitor's argument that a combination of the references was "well within the skill of an ordinary practitioner," the Court stated:

The PTO has the burden under section 103 to establish a prima facie case of obviousness. (citation) It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art that would lead that individual to combine the relevant teachings of the references. (Citations) 5 USPQ2d 1596, 1598.

The Board reiterated the Examiner's bald assertion that "substitution of one type of detector for another in the system of Eads would have been within the skill of the art," but neither of them offered any support for or explanation of this conclusion.

Obviousness is tested by "what the combination teachings of the references would have suggested to those of ordinary skill in the art." (Citation) But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." (Citation) And "teachings of references can be combined only if there is some suggestion or incentive to do so." *Id.* Here, the prior art contains none. 5 USPQ2d at 1599.

It is essential that "the decisionmaker forget what he or she has been taught . . . about the claimed invention and cast the mind back to the time the invention was made One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.



The Board erred not only in improperly combining the Eads and Warnick references but also in failing to appreciate that the appealed claims can be distinguished over that combination. 5 USPQ2d at 1600.

The references, taken as a whole, do not suggest Applicant's combination because the Beatson et al. reference teaches generation of tablet timing by the processor, which is contrary to Applicant's combination of clock circuit and separate means for verifying the timing. Also, Haneda et al. teach the cursor being vertically aligned, which is contrary to Applicant's cursor that is orthogonally aligned with the line segment to which it points. Further, the Matyas et al. reference fails to disclose or suggest erasure of each instance of the encryption key.

The other dependent claims 2-4, 6-15, 20-24, 26, and 27, are further believed to be allowable based on the subject matter of claims 1 and 19 from which they depend and because they further limit allowable subject matter.

Accordingly, it is believed that the rejections of claims 5-28 under 35 U.S.C. 103 have been overcome by the amendment and remarks; allowance thereof is respectfully requested.

NEW CLAIMS

Allowance of new claim 31 is requested based on the above remarks regarding the independent claim 25 from which it depends and because it further limits allowable subject matter. Allowance of the new claim 32 is requested based on the above remarks regarding claim 5. The new claims 33-36 are believed to patentably distinguish over the prior art by requiring the display of signature line segments having widths being representative of stylus pressure measurements and/or processor determination of stylus velocity in the corresponding line segments. Allowance of the new claims 37-41 is requested based on the above remarks regarding claims 19 and 25.

In view of the above, it is believed that this application, including each of the



claims 1-16 and 19-41, is in condition for allowance. Such allowance is respectfully requested. If for some reason the Examiner considers otherwise, it is respectfully requested that a telephone call be placed to the undersigned so that issuance of a patent can be expedited.

Respectfully submitted,

SHELDON & MAK

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